

**WHAT IS CLAIMED IS:**

1. A software system supporting distributed web  
5 applications between a client and a server equipped with a  
cache, wherein the software system comprises:

primary and secondary commands, which may be executed  
in the server in response to a request from the  
10 client;

a metadata property, for use in instructing properties  
by which the commands will be cached;

15 a pre-execution instruction sequence, which may be  
invoked when the primary command is executed, to  
execute one or more secondary commands and then  
return all the executed primary and secondary  
commands to the client; and

20 a post-execution instruction sequence, which may be  
invoked after the primary command is executed, to  
place the one or more secondary commands returned  
by the pre-execution instruction sequence into the  
25 cache, along with the primary command.

2. The software system as recited in claim 1, wherein the  
cacheable command instruction sequences further comprise:

30 requesting the command from the server;

preparing the metadata for caching the primary and  
secondary commands;

35 executing the command in the server;

placing the primary command in the cache of the  
server; and

5               conveying the executed command from the server to  
the client.

3.   The software system as recited in claim 1, wherein the  
one or more secondary commands executed and returned by the  
10 pre-execution instruction sequence are designated when the  
primary and secondary commands are created.

4.   The software system as recited in claim 1, wherein the  
one or more secondary commands executed and returned by the  
15 pre-execution instruction sequence are commands that may be  
needed in conjunction with the primary command.

5.   The software system as recited in claim 1, further  
comprising an instruction sequence whereby the primary or  
20 secondary command is entered into the cache.

6.   The software system as recited in claim 1, wherein the  
metadata property contains a cache ID, and wherein preparing  
the metadata for caching comprises setting the cache ID in  
25 the metadata of the primary or secondary command to  
designate a specific cache.

7.   The software system as recited in claim 1, further  
comprising an object-oriented software system.

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8.   The software system as recited in claim 1, wherein the  
server comprises a Java Virtual Machine (JVM).

9.   The software system as recited in claim 1, wherein the  
35 metadata property also contains a sharing policy, which

defines the manner in which the primary or secondary command in the cache of the server may be accessed by a second server.

5 10. A method for cofetching a plurality of commands in an object-oriented software system supporting web applications between a client and a server equipped with a cache, and the method comprises:

10 receiving a request for a primary command from the client;

preparing a metadata property, which encapsulates information for caching the primary command;

15 invoking a pre-execution instruction sequence, which, when the primary command is executed, executes one or more secondary commands and then returns the executed primary and secondary commands to the client; and

20 invoking a post-execution instruction sequence, which, after the primary command is executed, places the one or more secondary commands returned by the pre-execution instruction sequence into the cache, along with the primary command.

25 11. The method as recited in claim 10, further comprising defining the one or more secondary commands that are executed and returned by the pre-execution instruction sequence when the primary command is created.

12. The method as recited in claim 11, wherein defining the one or more secondary commands further comprises selecting

secondary commands that may be needed in conjunction with the primary command.

13. The method as recited in claim 10, further comprising  
5 invoking an instruction sequence to enter primary or secondary commands into the cache.

14. The method as recited in claim 10, wherein preparing the metadata property for caching comprises setting a cache  
10 ID in the metadata property, to designate a specific cache.

15. The method as recited in claim 10, wherein the software system comprises an object-oriented software system.

16. The method as recited in claim 10, wherein the server  
15 comprises a Java Virtual Machine (JVM).

17. The method as recited in claim 10, further comprising  
20 defining a sharing policy component within the metadata property, which dictates the manner in which the primary or secondary command present in the cache of the server may be accessed by a second server.

18. A computer product, comprising a web server and a  
25 software system, wherein the web server includes a processor, memory, mass storage and a network interface, and the software system is adapted to permit cofetching a plurality of commands together with a primary command requested from the server by a client.

19. A system including processor and memory for cofetching  
30 commands in a web application between client and server, comprising:

a cache;

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means for receiving a request for a primary command  
from the client;

5 means for preparing a metadata property, which  
encapsulates information for  
caching the primary command;

10 means for invoking a pre-execution instruction  
sequence, which, when the  
primary command is executed, executes one or more  
secondary commands and  
then returns the executed primary and secondary  
commands to the client; and

15 means for invoking a post-execution instruction  
sequence, which, after the  
primary command is executed, places the one or more  
secondary commands  
returned by the pre-execution instruction sequence into  
20 the cache, along with the  
primary command.

20. A computer program product in a computer readable  
medium for cofetching commands in a web application between  
25 client and server, comprising:

means for receiving a request for a primary  
command from the client;

30 means for preparing a metadata property, which  
encapsulates information for caching the primary  
command;

35 means for invoking a pre-execution instruction  
sequence, which, when the

primary command is executed, executes one or more secondary commands and then returns the executed primary and secondary commands to the client; and

- 5 means for invoking a post-execution instruction sequence, which, after the primary command is executed, places the one or more secondary commands returned by the pre-execution instruction sequence into the cache, along with the primary command.

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